

What are rain barrels used for?

Overall purpose and benefits

Rain barrels collect and hold rainwater from rooftops, which can be used for watering lawns and gardens. Water collected in rain barrels is kept from flowing over paved surfaces, picking up pollutants, entering a storm drain, and eventually discharging into local waterways.

- Rain barrels conserve water and save money, providing over 1,000 gallons of water during peak summer months.
- Rainwater provides a source of un-chlorinated water for your plants.
- Using stored rainwater on your garden or lawn instead of directing rooftop runoff to the storm drain helps re-charge groundwater naturally.
- Rain barrels improve water quality by reducing the amount of runoff that travels over impervious surfaces, which are a source of pollutants such as sediment, oil, bacteria, metals and nutrients.

Rainfall capture

The amount of rain that will fill your barrel(s) depends on two things:

- Total capacity of all connected barrels (there may be just one)
- Roof area that drains to the barrel(s) via one or more downspouts

The calculation below allows you to determine the size of the storm (measured in inches) that will fill your rain barrel. This assumes that the rain barrel is completely emptied between storms, either passively through a soaker hose, or actively by drawing water from the tap.

How much rain will fill your barrel?

First, measure the area of the roof that drains to your barrel(s). If you have more than one barrel, add up the volume of all connected barrels.

Rainfall depth that fills the barrel(s) = $1.6 * V / R$

1.6 = Unit conversion factor

V = Total rain barrel volume (gallons)

R = Roof area draining to the barrel(s) (square feet)

Example: A rainfall of 0.2 inches over a 450 square foot roof will fill a 55-gallon barrel. Any additional rain will either flow through an overflow pipe onto the lawn or bypass to the existing downspout, depending on your setup.

0.2 inches = $1.6 * 55$ gallons / 450 square feet



Newly Installed Rain Barrel with Diverter at the Rockville Senior Center



How to install and maintain a rain barrel

Siting and installation

1. Choose a location near a downspout.
2. Level the ground and place paver blocks as a base.
3. With the empty rain barrel in place, measure the new downspout length that is needed.
4. Remove and cut the existing downspout.
5. Re-attach the downspout or the downspout adapter.
6. Set the rain barrel in place and connect it to the downspout.
7. Direct the overflow away from the foundation.

Uses for the stored water

- Use a solid hose or a soaker hose to water plants
- Fill buckets/watering cans
- Take water to a different part of the yard

Maintenance recommendations

- Have a use for the water, even if simply draining slowly through a soaker hose. It should not sit indefinitely.
- Empty and disconnect the barrel at least once per year and clean with soap and water or a biodegradable cleaner. Allow to dry before reinstalling.
- Periodically remove accumulated debris in the rain barrel.
- Keep gutters clean as a form of preventive maintenance.
- You may choose to periodically drop in a capful of bleach. This will not hurt plants.
- A screen is highly recommended to control mosquitos and debris. Mosquito pellets can be added as a secondary measure.
- Winter precautionary measures: Freezing water can cause your barrel

to crack or deform. When the temperature is below freezing, remove the barrel and store in the garage or shed. If this is not practical, disconnect the barrel and divert water directly to the ground using the downspout or a downspout extension.

Rain barrel adaptations

- If using an outflow hose, you will increase water pressure by raising the rain barrel on blocks or a stand.
- Use multiple barrels to capture more water and lessen the occurrence of overflows.
- Make your barrel a decorative part of the landscape...
- ... or tuck it out of sight, for instance, near the heat pump.
- Attach a downspout adapter that will allow you to direct water to either the barrel or the downspout.

Want to install/assemble/make your own rain barrel?

Informational Websites

Center for Watershed Protection - www.cwp.org/2013-04-05-16-15-03/what-you-can-do

Chesapeake Bay Foundation - www.cbf.org/document.doc?id=30

Interstate Commission on the Potomac River Basin – www.potomacriver.org/projects/rainbarrels

Local RainScapes Rebate Programs

City of Rockville - www.rockvillemd.gov/rainscapes

City of Gaithersburg - www.gaithersburgmd.gov/services/environmental-services/rainscapes-reward-program

Montgomery County - www.montgomerycountymd.gov/DEP/water/rainscapes-rebates.html



Sampling of Rain Barrel Vendors



Aaron's Rain Barrels (MA)
www.ne-design.net
 978.790.1816



Aquabarrel (MD)
www.aquabarrel.com
 301.253.8855



Arlington Echo Outdoor Education Center (MD)
www.arlingtonecho.net
 410.222.3822



Employ The Rain (MD)
<http://employtherain.com/>
 301-775-5998



Epoch Solutions (NC)
www.epoch-solutions.com
 919.636.0617



Gardeners Supply Company (VT)
www.gardeners.com
 888.833.1412



GREENCulture - Water Savers (CA)
www.composters.com/rain-barrels.php
 877.204.7336



Rain Barrels and More (IN)
www.rainbarrelsandmore.com
 877.888.5609



Roll Out the Rain Barrel (MD)
www.rollouttherainbarrel.com
 301.641.1699



Spruce Creek RainSaver (PA)
www.sprucecreekrainsaver.com
 800.940.0187



The Great American Rain Barrel Company (MA)
www.greatamericanrainbarrel.com
 800.251.2352

*Disclaimer: the products and companies listed above are provided solely as an impartial reference and do not constitute an official endorsement or approval by the City of Rockville or any of its agencies. If you are a company selling rain barrels and would like to be included in this list, please contact environment@rockvillemd.gov.



Sampling of Rain Barrel Accessory Vendors

Downspout Diverters



Gardeners Supply Company (VT)
www.gardeners.com
888.833.1412



Garden Watersaver (BC)
www.gardenwatersaver.com
604.274.6630



RainReserve
rainreserve.com
608.316.6844

Raw Barrel Suppliers



Abbey Drum Company (MD)
www.abbeydrum.com
800.284.0974



James T. Warring Sons Inc. (MD)
www.warringbarrels.com
301.322.5400

Do-It-Yourself Kit



Aquabarrel (MD)
http://aquabarrel.com/product_rain_barrel_parts_kits.php
301.253.8855



Home Depot (Online)
<http://www.homedepot.com/p/EarthMinded-DIY-Rain-Barrel-Diverter-and-Parts-Kit-RBK-0001/203256576>

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Rain Barrel Assembly



A PARTNERSHIP BETWEEN POTOMAC CONSERVANCY AND THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION

RAINSCAPES

During the past several years, the Rainscapes Program staff have worked with a number of designs to develop a basic, long-lasting, and easy-to-assemble rain barrel, using parts readily found at most home improvement centers. The following instructions reflect the most recent model.

If you have picked up your rain barrel through one of our "Make and Take" workshops, many of the preliminary steps have been completed for you. Skip to the appropriate instructions for guidance in finishing your rain barrel.

The following listing provides the name and model number of the parts used to make our Rain Barrel. The cost for all parts at a standard hardware store is approximately 15 dollars.

Rain Barrel Hardware

Overflow:

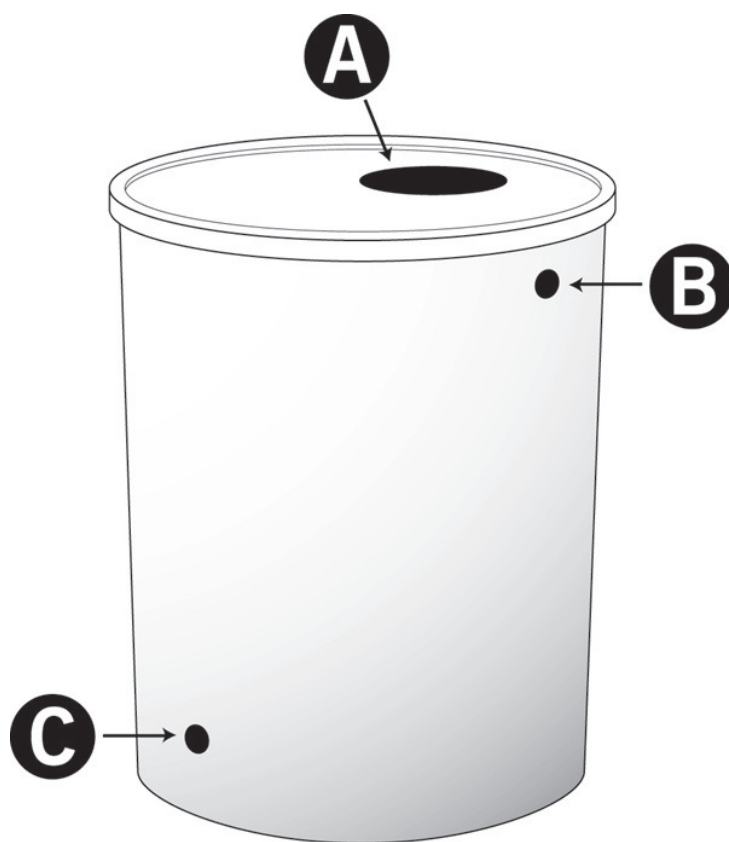
1-1/4" Adapter Insert MPT (SWP151)
Size 24 25-50mm Metal Hose Clamp
1-1/4" Sump Pump Hose (Flotec FP0012-6F)
Silicone sealer or teflon tape (opt.)

Inlet Grate:

6" NDS Green Grate
6-7" Metal Clamp #10
12" square Window Screen

Hose Bibb/Sillcock:

Brass Sillcock/Hose Bibb 3/4" MPT
Silicone sealer or teflon tape (opt.)



Basic Instructions

Step A: Cut a hole in the top of your barrel for the inlet drain. The hole should only be large enough to allow the grate to rest on its flange. Cut the hole using either a RotoZip™ drill or carefully measure and mark the area to be cut, start a pilot hole, and cut out the marked area with a jigsaw.

Step B: Use a 1-1/2 inch keyhole bit to cut a hole to accommodate the 1-1/4 inch Overflow Adapter. You may need to rasp or sand the hole somewhat larger to screw in the Adapter. Expect a snug fit.

Step C: Use a 15/16 inch drill bit to cut a hole for the 3/4-inch Brass Hose Bibb.

Rainscapes

Step D: Insert the threaded end of the Overflow Adapter Insert into the overflow hole. Keep the adapter straight as you screw it into the barrel.

Step E: Insert the threaded Hose Bibb into the already drilled hole. Keep the hose bibb straight as you screw it into the barrel. You may also apply a bead of silicone caulk or wrap teflon tape around the bibb before inserting it to ensure a tight, drip-free connection.

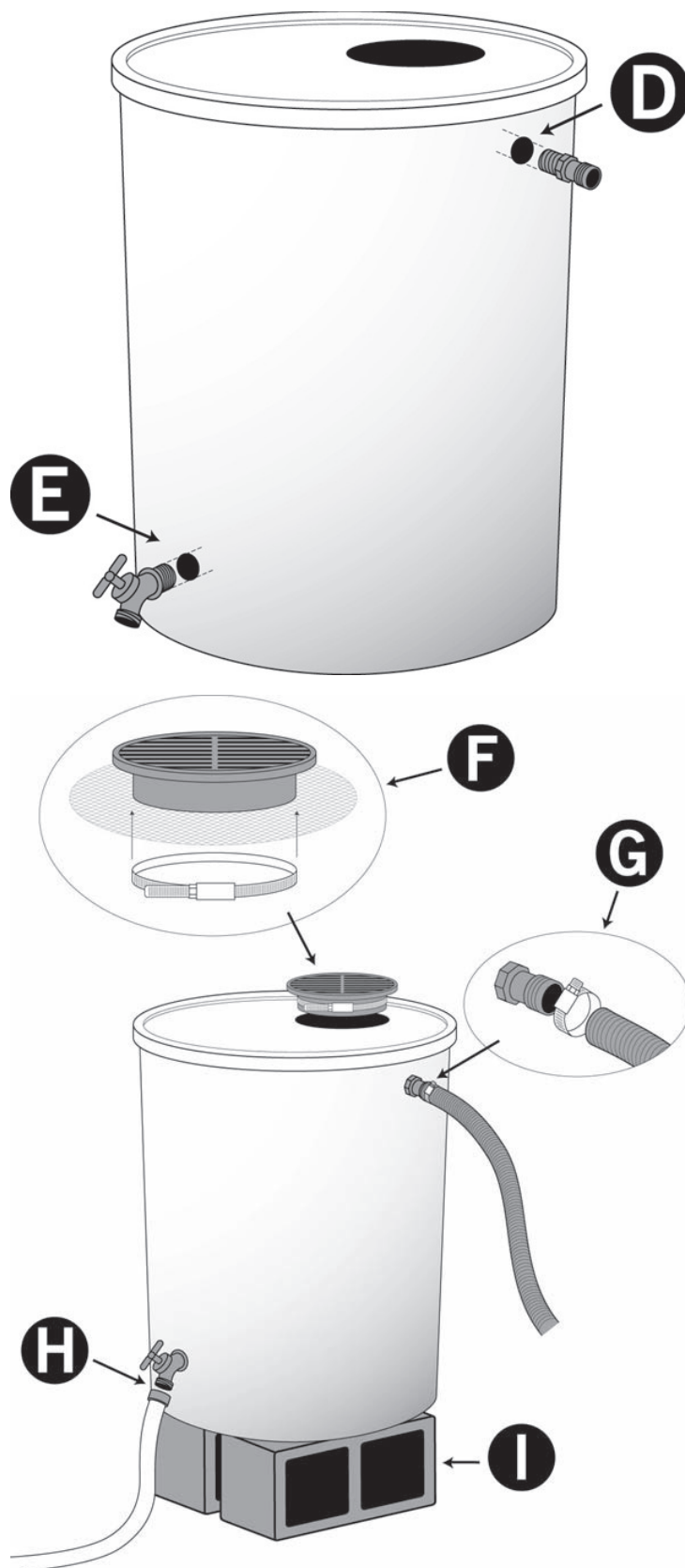
Step F: Use the larger #10 Metal Clamp to firmly attach the window screen to the bottom of the Green Grate. Tighten the clamp with a screwdriver or nut-driver. Place the Inlet Assembly into the barrel.

Step G: Slide the smaller size 25 Metal Hose Clamp over the barbed section of the Adapter Insert. Slide one end of the Sump Pump Hose over the Adapter and use the Hose Clamp to firmly attach the Hose to the Adapter.

Step H: Attach a garden hose or soaker hose to your Hose Bibb.

Step I: Use cinderblocks or similar pavers to elevate the completed Rain Barrel off the ground to ensure easier access to the Hose Bibb, and to facilitate gravity-fed drainage.

Notes: Be sure to use/drain your rain barrel at regular intervals, and before the winter season. Keep rain gutters clean of debris to prevent mosquito eggs and larvae from entering your barrel. Check connections routinely; clean debris from the Grate Assembly when needed.



For more information, visit
www.rainscapes.org
or contact the following
organizations:



Potomac Conservancy
8601 Georgia Avenue, Suite 612
Silver Spring, MD 20910
301.608.1188 fax 301.608.1144
www.potomac.org



**Montgomery County
Department of
Environmental Protection**
255 Rockville Pike, Suite 120
Rockville, MD 20850
240.777.7770 fax 240.777.7765
email: help@rainscapes.org
montgomerycountymd.gov/dep